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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,224	02/29/2000	Emil P Novakov	3	1601

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EXAMINER

WILLIAMS, DEMETRIA A

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 09/24/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/515,224

Applicant(s)

NOVAKOV, EMIL P

Examiner

Demetria A. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 and 9-13 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because the corrected drawings were not enclosed with the amendment filed June 19, 2003, as purported on page 7 of this amendment.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atarius in view of Arora.

4. Regarding claims 1, 9, and 11, Atarius discloses a system and method for determining the position of a frequency correction burst (FCB) comprising receiving a signal and detecting the occurrence of a frequency correction burst (see generally column 4, line 63 – column 5, line 67), reducing the noise of the FCB through cross-correlation (see generally column 5, lines 26-67), and determining a predefined reference based on filtered output (see generally column 5, lines 40-44). Atarius does not specifically disclose adapting the filter to the noise-reduced signals. Arora discloses a system and method for determining a constant frequency interval wherein a filter is adapted to noise reduced signals (see generally column 3, lines 39-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the

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teachings of Atarius to include adapting the filter to the noise reduced signals, as disclosed by Arora, in order to improve the effective signal-to-noise ratio.

5. Regarding claim 2, Atarius discloses that if an estimate has a peak that is at least as great as a predetermined threshold, then the signal corresponds to an FCB (see generally column 7, lines 12-15). Therefore, the threshold must define the beginning of the constant frequency interval.

6. Regarding claim 3, Atarius further discloses determining the peak values of the filtered output and detecting a change in the peak value that exceeds a threshold (see generally column 5, lines 40-44).

7. Regarding claim 4, Atarius discloses all of the elements as applied above in reference to claim 1, but not disclose that a FIR bandpass filter performs the filtering. However, the use of this type of filter is well known in the art for filtering. Arora discloses a system and method for determining a constant frequency interval wherein a BPF is used to filter the signal that has been adapted and tuned to the frequency of the FCB (see generally column 3, lines 39-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Atarius to include the use of a BPF instead of a LPF, as disclosed by Arora, because it is well known in the art that the type BPFs and LPFs are interchangeable, depending upon which frequency components it is desired to remove.

8. Regarding claim 6, Atarius further discloses a cross correlation value between a first and second section of the signal (see generally column 5, lines 26-67).

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9. Regarding claim 7, Atarius further discloses that the constant frequency interval is determined after the signal is noise-reduced (see generally column 4, line 63 – column 5, line 67).

10. Regarding claims 10, 12, and 13, Atarius further discloses that the method is used in a GSM system or other mobile communications system (see generally column 11, lines 17-25).

Response to Arguments

11. Applicant's arguments with respect to claims 1 and 9 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetria A. Williams whose telephone number is (703) 305-4078. The examiner can normally be reached on Monday - Friday, 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (703) 306-3034. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

daw


MOHAMMAD H. GHAYOUR
PRIMARY EXAMINER